

Date: Fri, 21 Oct 94 04:30:39 PDT  
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>  
Errors-To: Ham-Homebrew-Errors@UCSD.Edu  
Reply-To: Ham-Homebrew@UCSD.Edu  
Precedence: List  
Subject: Ham-Homebrew Digest V94 #310  
To: Ham-Homebrew

Ham-Homebrew Digest                      Fri, 21 Oct 94                      Volume 94 : Issue    310

Today's Topics:

          low power fm short range xmitter  
                  Microwave oven leakage?  
          Paralleling amplifiers (2 msgs)  
                  Ten-Tec Kits AT LAST!  
          The Little Razor Blade Radio  
                  VLF Antenna Design  
          xmitting on 2.4 GHz with Microwave Oven? (2 msgs)

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>

Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 21 Oct 1994 02:04:18 GMT  
From: jim\_b@ix.netcom.com (Jim Blake)  
Subject: low power fm short range xmitter

Hi.

I am interested in information on short range fm transmitters. I have  
an application in mind that calls for transmitting up to 100 feet from  
the transmitter location, to be received on a radio such as a  
Walkman or similar FM radio. Stereo would be a nice plus, but it is  
not required. Also, if the only solution that satisfies requires  
building a device from scratch, this is acceptable.

I have tried several inexpensive commercial devices, but they are all  
unsatisfactory, in that the signal is loaded down with static or other  
noise.

If anyone has information that might be of help, please e-mail me at jim\_b@netcom.com. I apologize for the fact that this is not quite an amateur radio topic, but I could find no better starting point. If anyone can suggest a better forum for this type of request, please let me know.

Thanks for your assistance!

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Date: 20 Oct 1994 17:43:21 GMT  
From: charnoft@wfu.edu (Forrest T Charnock)  
Subject: Microwave oven leakage?

I once detected it with my walkman :)  
Just play it without a tape and listen.

--  
                  \*                  \*                  \*                  \*                  \*  
Olin Physical Lab                  |          The more the pity that fools may not speak  
Wake Forest University             |          wisely what wise men do foolishly.  
Winston-Salem, NC                  |                                  --Touchstone  
KE4RJG                              |

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Date: Thu, 20 Oct 1994 15:17:32 GMT  
From: ve8ev@gov.nt.ca (John Boudreau)  
Subject: Paralleling amplifiers

I have several identical 2m amplifiers. Could anyone tell me how feasible it would be to operate them in parallel using phasing cables on the inputs and outputs similar to phasing two antennas?

Thanks,

=====  
John Boudreau VE8EV          INTERNET: ve8ev@amsat.org  
Inuvik, NWT, CANADA          PACKET: VE8EV@VE8YEV.#INU.NT.CA.NOAM  
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Date: Thu, 20 Oct 1994 22:27:58 GMT  
From: mack@ncifcrf.gov (Joe Mack)  
Subject: Paralleling amplifiers

In article <19940ct20.151732.17084@gov.nt.ca> ve8ev@gov.nt.ca (John Boudreau)

writes:

>I have several identical 2m amplifiers. Could anyone tell me how  
>feasable it would be to operate them in parallel using phasing cables  
>on the inputs and outputs similar to phasing two antennas?  
>

I'm thinking of doing the same thing myself on 432 with tube amps. If you do it I'd be glad to hear how it goes. I hope I'm not boring you with the obvious, but the problems I've thought about is that with tube amps, they are not likely to be identical (pahse shifts through input and output circuits and fiddling to get each one tuned up). If you use a combiner then the two rigs will interact as you tune them. If you tune each for maximum smoke then you need two identical power meters in each line. I don't know how different the phase shifts can be before you get into trouble.

The other thought is to use hybrids to combine the power - the amps don't interact and the unbalanced power dumps out one port and can be watched with a power meter. This arrangement seems simpler to tune. However if you extend it to four amps, it becomes a nightmare - you need 3 hybrids on each side (input and output), while for the combiner approach you only need a different combiner. I can't imagine that you could tame 4 amps on combiners.

I have heard of people putting two tube amps together but I don't know how easy they were to tune.

Good luck

Joe Mack NA3T

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Date: 20 Oct 94 11:21:26 EST  
From: loase@beast.cs.hh.ab.com  
Subject: Ten-Tec Kits AT LAST!

I received my T-KIT 6 meter transverter yesterday.

first impresstions are

1. Not a Heathkit but very nice.
2. Good manual
3. skimped a little on the board
  - no solder mask
  - no plated through holesbut still a nice board.
4. Very complete kit
5. Nice looking metal silk screened cabinet
6. How in the world did they give me all this for \$95.00

Best Regards  
Jim Loase WD8RPT

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Date: 20 Oct 1994 10:10:07 -0700  
From: burt@teleport.com (Burt Keeble)  
Subject: The Little Razor Blade Radio

I am having the greatest time discovering the secrets of this gadget.

It's principal components are a razor blade and a pencil lead.

You wrap a coil (120 turns) around a toilet paper tube.  
One end communicates with the antenna and the razor blade.  
The other end communicates with the ground and the earphone.  
the earphone sits between the pickup (pencil lead attached to a paper clip) and the ground.

At present, all i can get is the same station at 970 KH, regardless of the size of the coil, or the kind of razor blade.

It even works when it is \*not\* grounded! (Go Figure).

Would anyone care to elaborate on this subject, offer ideas for improvement while keeping things primitive, or share similar experiences with similar types of receivers?

Thanks,

-burt  
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"We are all descended from a long line of determined, resourceful, microscopic tadpoles--champions every one." K.V.

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Date: Thu, 20 Oct 1994 13:32:33 GMT  
From: novatech@eskimo.com (Steven Swift)  
Subject: VLF Antenna Design

ka7oei@uugate.wa7slg.ampr.ORG writes:

>One word about E-field whips: I have a decent E-field whip and it works very

>well... provided that you are NOWHERE NEAR a powerline... Its frequency  
>response extends into the KHz region (if I place it near an audio line, like  
>one leg of a speaker wire...) I can hear what is being carried if I have  
>the output of the antenna connected to a high-gain audio amp... but the  
>OMEGA signals will drive you bananas, too...) If you are 'bent on building  
>one of these, I would consult one of the several articles written in the  
>past by Ralph Burhans that have appeared in 73 Magazine. HE knows of what  
>he speaks! Again, they DO work well, but in urban environments, expect to  
>hear a lot of noise... unless you are lucky... and no-one is using a  
>light-dimmer in your neighborhood... Even then, you could use a  
>synchronous noise-blanker, but thats another story...

><Clint>

>ka7oei@uugate.wa7slg.ampr.org

I tried a E-field whip to get WWVB at 60kHz and I'm two blocks from  
a major power feed into Seattle-- you're right-- I couldn't get it  
to work, while a 7.5 inch ferrite rod with 100 turns bifilar, resonated  
at 60kHz was great. I also got too much of Jim Creek (NLK) at 24.8kHz  
with the E-field.

The trick with e-field is that you need to have it higher than interfering  
signals-- tough for me with a single story house and transmission lines.

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Steven D. Swift, P.E. ( novatech@eskimo.com )  
NOVATECH INSTRUMENTS, INC.  
1530 Eastlake Avenue East, Suite 303  
Seattle, Washington 98102 USA

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Date: 20 Oct 1994 08:51:38 GMT  
From: lascal@marcus.its.rpi.edu (Lance Lascari WS2B)  
Subject: xmitting on 2.4 GHz with Microwave Oven?

vimx (vimx@delphi.com) wrote:

: Sounds frightening, doesn't it? I would think it's more dangerous to use  
: a regular transmitter because you'd be making microwaves more efficiently.  
: It would be a wild EME experiment, woudn't it?  
: Hypothetically, how would you connect the magnetron to an antenna, and  
: what kind of antenna would it be? A horn? If this is possible, legal, and  
: useful I think I might want to try it someday after I learn a lot more about  
: microwaves, but for now it's a lot of fun to think about.  
: Any thoughts or ideas on this?

well, there was an article in 73 magazine a few years ago about building an FMTV (amateur) transmitter with an oven. I think the guy built a special coupler to tap out the energy (like maybe a homebrew waveguide-> coax "de-launcher"). The problem cited in the article was that the magnetron was not particularly stable. They're pretty wideband.

He did suggest phase-locking the oven to something though :)!  
-L

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Lance Lascari WS2B <lascal@rpi.edu> Senior EE @ Rensselaer Polytechnic Inst.  
Mount Greylock Expeditionairy Farce Secret agent #52,342

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Date: 20 Oct 1994 14:39:20 GMT  
From: smasters@bzy.gmu.edu (Shawn C. Masters)  
Subject: xmitting on 2.4 GHz with Microwave Oven?

vimx (vimx@delphi.com) wrote:

: Sounds frightening, doesn't it? I would think it's more dangerous to use

Not really. Most ovens have less power then the best HAM setups.

: Hypothetically, how would you connect the magnetron to an antenna, and  
: what kind of antenna would it be? A horn? If this is possible, legal, and  
: useful I think I might want to try it someday after I learn a lot more about  
: microwaves, but for now it's a lot of fun to think about.  
: Any thoughts or ideas on this?

How would you modulate the signal? CW might work if the magnetron can be switched on and off fast enough.

73,

Shawn  
KE4GHS

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End of Ham-Homebrew Digest V94 #310  
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